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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,643	03/23/2004	Jeffrey J. Schroeder	35691US1	2569

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EXAMINER

VO, HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/806,643

Applicant(s)

SCHROEDER ET AL.

Examiner

Hai Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,3, 5, 7, 10-12, 15-23, 33, 35, 39-42, 44, 45, and 47-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3, 5, 7, 10-12, 15-23, 33, 35, 39-42, 44, 45, and 47-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The art rejections based on Holtrop et al (US 4,557,970) have been withdrawn because Holtrop does not teach the foam layer being effective to withstand operative heat shield temperatures of at least 1000°F and to dampen acoustic tonal frequencies below 2000 Hz.
2. The art rejections based on Pollock (US 4,525,406) are maintained.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2, 3, 5, 7, 10-12, 15-23, 33, 35, 39-42, 44, 45, and 47-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 47 does not appear to limit as Applicants intended. A preamble is inconsistent with the body of the claim. It is not clear whether a heat shield or an automobile body panel having a heat shield fastened or mounted to the body panel is claimed?

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3, 5, 7, 10-12, 19-23, 33, 35, 39-42, 44, 45, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollock (US 4,525,406) in view of Hasegawa et al (US 4,923,904) and the "Dynamat and Automotive" article, 1991. Pollock teaches a thermal insulation layer comprising a first metallic outer layer, a second metallic outer layer and a polyethylene foam layer disposed between the first and a second metallic layer. Pollock discloses the thermal insulation layer further comprising a layer of polyester fluffy fibers laminated to the second metallic outer layer opposite the foam layer. The fluffy fiber layer is about 10-20 mm thick (figures 1 and 2, column 1, lines 60-62). Pollock discloses the foam being 3 mm thick within the claimed range (column 1, lines 48-50). Pollock discloses that the foam is suitable for use as a duvet. Likewise, the foam is sufficiently pliant to be bent to and accommodate a particular shape and contour to which the duvet is to be bent. Further, Pollock discloses that the thermal insulating layer can be used in industrial situations where a lightweight, flexible, thermal insulating layer is required (column 3, lines 15-20). The "Dynamat and Automotive" article shows that the lightweight, flexible Danamat product having been used as a shield from exhaust engine and solar heat. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the thermal insulating layer of Pollock on the car engine because the lightweight and flexibility makes the thermal insulating layer of

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Pollock suitable as a shield from exhaust engine and solar heat as the Danamat products.

Pollock does not specifically disclose the foam layer being made from an expandable foaming composition as recited in the claims. However, Hasegawa discloses a polyurethane foam for use in heat insulating materials made from a composition similar to the composition as set forth in the claims. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the polyurethane foam as taught in the Hasegawa invention as the foam layer because such is an intended use of the material and Hasegawa provides necessary details to practice the invention of Pollock.

The foam layer of Pollock as modified by Hasegawa is made from a composition similar to the composition as set forth in the claims. Hence, it is not seen that the foam layer could not have a heat resistance and damping properties as set forth in the claims. Like material has like property. The same token is applied to reversed deflectability, area density, vibration damping and acoustical properties of the foam.

7. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pollock (US 4,525,406) in view of Hasegawa et al (US 4,923,904) and the "Dynamat and Automotive" article, 1991 as applied to claim 47 above, further in view of Hurwitz (US 3,833,951). Pollock does not teach the thickness of the metallic layer. Hurwitz, however, teaches a sleeping pad comprising a

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metallic layer having a thickness of 2 to 4 mils within the claimed range.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the metallic layer having a thickness as taught by Hurwitz motivated by the desire to provide rapid dissipation of heat.

8. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollock (US 4,525,406) in view of Hasegawa et al (US 4,923,904) and the "Dynamat and Automotive" article, 1991 as applied to claim 47 above, further in view of Ivester et al (US 5,299,335). Pollock does not teach the porous fabric embedded within the foam layer (column 2, lines 47-50). Ivester, however, discloses the fragrance-releasing pillow comprising strips of porous fabric with one of compartment formed therein. Ivester teaches the compartments hold the capsules impregnated with a volatile substance. Ivester discloses the porous fabric strips placed centrally in the foam layer (column 3, lines 14-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to embed the porous fabric strips as taught by Ivester in the foam of Pollock motivated by the desire to provide means for masking odor which are absorbed by duvet.

Ivester does not specifically disclose the porous fabric carrier made from non-woven polypropylene fibers. The examiner takes Official Notice that it is common and well known in the bedding material art that the porous fabric is made from non-woven polypropylene fibers.

***Response to Arguments***

9. The art rejections based on Pollock have been maintained for the following reasons. Applicants argue that the combined teachings of the cited references do not achieve the claimed invention, namely the temperature resistance and acoustical damping properties of the foam layer. The examiner respectfully disagrees. The foam layer of Pollock as modified by Hasegawa is made from a composition similar to the composition as set forth in the claims. Hence, it is not seen that the foam layer could not have a heat resistance and damping properties as set forth in the claims. Like material has like property. Applicants contend that one would not be motivated to undertake the time and expense to design a foam having such exceptional temperature-resistance properties for use in a duvet or pillow that will never see temperatures greater than 100°F. The arguments are not found persuasive for patentability because Pollack discloses that in addition to be useful as a duvet, the thermal insulating layer can be used in industrial situations where a lightweight, flexible, thermal insulation layer is required (column 3, lines 15-20). The "Dynamat and Automotive" article shows that the lightweight, flexible Danamat product having been used as a shield from exhaust engine and solar heat. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the thermal insulating layer of Pollock on the car engine because the lightweight and flexibility makes the thermal insulating layer of Pollock

suitable as a shield from exhaust engine and solar heat as the Danamat products. Accordingly, the foam layer as modified by Hasegawa et al (US 4,923,904) and the "Dynamat and Automotive" article would have the temperature resistance and automobile acoustical damping as set forth in the claims to make it suitable as a shield from exhaust engine and solar heat.

Applicants argue that if one were considering how to improve heat shield performance for heat shield, he would not look a reference describing a fragrance-releasing pillow. The arguments appear to be incomplete and flawed. It is reminded that Pollack discloses that the thermal insulating layer can be used in both duvet applications and industrial situations where a lightweight, flexible, thermal insulation layer is required, namely a heat shield for the automotive body panel. Therefore, there would be a motivation to combine the teachings of Pollack with Ivester to achieve the claimed invention. Similarly, there would be a motivation to combine the teachings of Pollock with the "Dynamat and Automotive" article as well. Ivester and Pollock both serve for the same purposes, namely duvet or pillow materials and the combination of these two references does enjoy the reasonable expectation of success. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to embed the porous fabric strips as taught by Ivester in the polyethylene foam of Pollock motivated by the desire to provide means for masking odor which are absorbed by duvet. Certainly, there would be a motivation to employ an



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insert of Ivester in a duvet, not a heat shield as contended by Applicants.

Accordingly, Pollack is properly combinable with Ivester.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vo

**HAI VO  
PRIMARY EXAMINER**